

# AIS-3023 Series

Mini-ITX Fanless Comet Lake-S Platform H420E  
LGA1200 for Intel 10<sup>th</sup> Core i9/i7/i5/i3 CPU  
HDMI/DP, 2LAN, 4COM, 8USB, DC-IN 12V



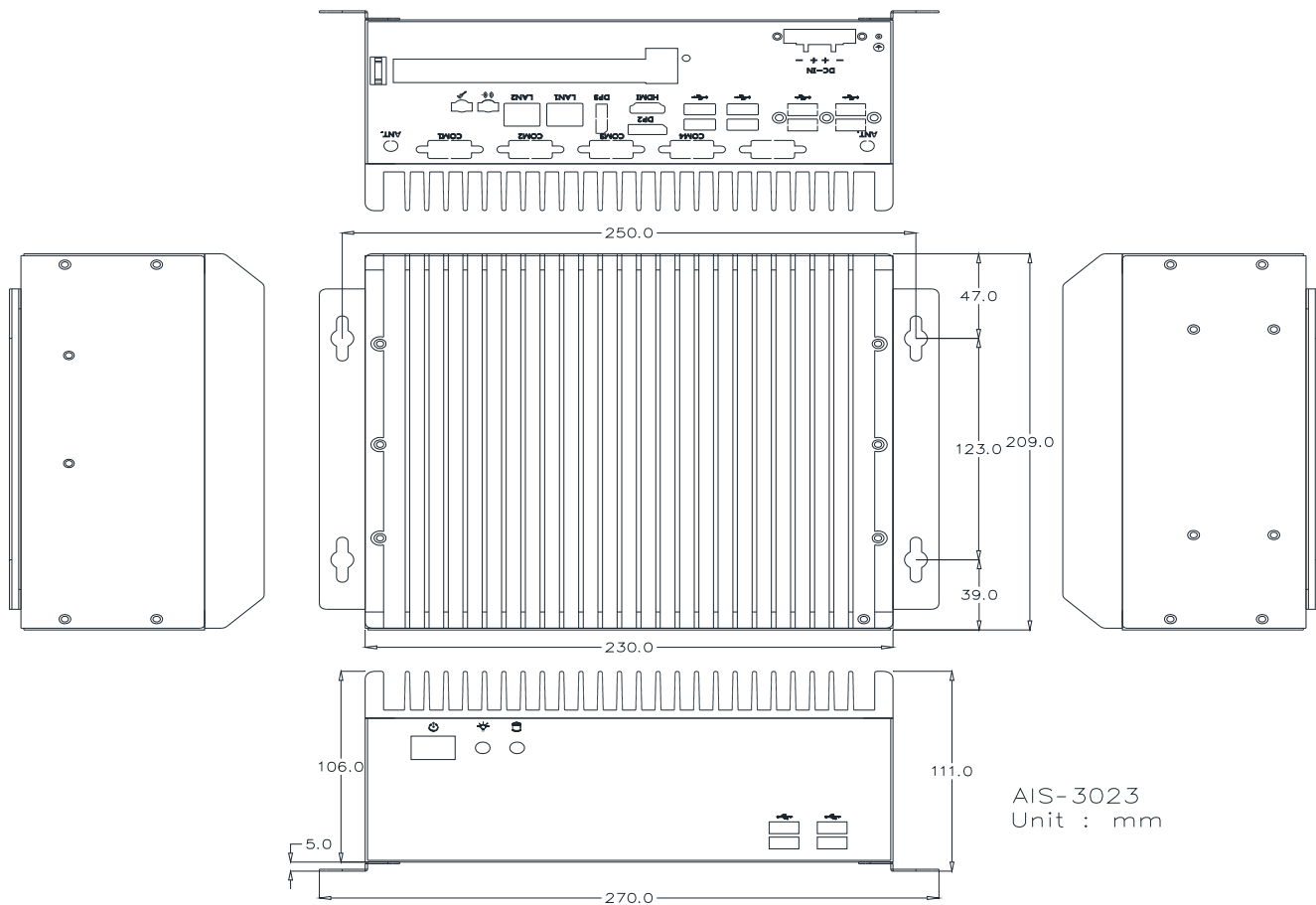
## Features

- Fanless Mini-ITX system with Intel H420E Chipset, supports Socket LGA-1200 Intel 10<sup>th</sup> Core i9/i7/i5/i3 Processors
- Dual Channel DDR4, 2 x SO-DIMM, up to 64GB system memory
- Dual display HDMI/DP, Dual LAN, Intel I225LM 2.5G, I219V 1G
- 4x COM(COM1/2 RS-232/422/485, COM3/4 RS-232)
- 2x USB3/USB2 are on rear, 4USB2 on front (option 12USB)
- One PCIe16 slot for add-on card (up to 20cm) expansion
- DC 12V input
- 0°C ~ 50°C harsh operation environment

## Specifications

AIS-3023 Series Key Features		AIS-3023-9E	AIS-3023-7E	AIS-3023-5E	AIS-3023-3E
Processor System	CPU (Comet Lake-S)	i9-10900TE	i7-10700TE	i5-10500TE	i3-10100TE
	Cache / Core	20MB, 10-Core	16MB, 8-Core	12MB, 6-Core	6MB, 4-Core
	Base / Max Frequency	1.8GHz / 4.5GHz	2.0GHz / 4.4GHz	2.3GHz / 3.7GHz	2.3GHz / 3.6GHz
	TDP	35W			
Expansion Slot	Chipset	Intel H420E			
	M.2 (KEY E)	1 x M.2 (2230) with PCIe1, USB 2.0 for Wireless			
	M.2 (KEY B)	1 x M.2 (3042/ 3052) with PCIe1/ USB 3.0/ USB 2.0) and SIM for 4G/5G			
	M.2 (KEY M)	1 x M.2 (Key M, 2242/2260/2280) with PCIe x2 and SATA3 for SSD			
Memory	Riser for PCIe(x16)	Supports one PCIe16 card			
	Specification (SO-DIMM)	2 x Dual Channel DDR4-2933 MHz		2 x DDR4-2666 MHz	
Graphics	Max. Capacity	Up to 64 GB system memory			
	HDMI	1x HDMI 2.0a, maximum resolution up to 4096 x 2160@60Hz			
	DP2	1 x DisplayPort 1.2, DP++, maximum resolution up to 4096x2160 @ 60Hz			
Ethernet	*DP3	Optional 1 x DisplayPort 1.2, maximum resolution up to 4096x2160 @ 60Hz by Q470E			
	Interface Controller	Dual GbE, 1 x Intel I219V with 1G Mbps, 1 x Intel I225LM with 2.5G Mbps			
SATA	Connector	2 x RJ-45			
	SATA 3	2 x SATA3 ( 6.0 Gb/s)			
System Rear I/O	HDMI	1 x HDMI			
	DP	1 x DP			
	Ethernet	2 x RJ45			
	USB (IMB I/O)	2 x USB3.2, 2 x USB 2.0 (option extra 4 x USB 2.0 )			
	Serial (IMB I/O)	4 x COM (COM1/2 by RS-232/422/485, COM3/4 by RS-232 only)			
System Storage	Audio	1 x Audio ports (Mic-in, Line-out)			
	HDD Driver Space	1 x HDD Space for one 2.5", option HDD2 cadge for two 2.5" HDD( w/o PCIe16 feature)			
Optional Features on Rear I/O	USB 2.0	4 x USB 2.0 by internal USB 2.0 HUB			
	GPIO	1 x DB-9 or DB-15 for 4 x GPI + 4 x GPO by inquiry			
System Front Bezel	Power On-Off Switch	1 x Soft switch			
	Power LED	1 x LED for system power status			
	HDD LED	1 x LED for HDD data access status			
	USB 2.0	4 x USB 2.0			
Operation System	Windows 10	Win10 64-bit IoT Ent 2016 LTSC or 2019 LTSC			
Watchdog Timer	Output and Interval	System reset, programmable 1-255 sec/min; 1 sec. or 1min. / step			
System Power	DC Input	1 x 4-pin phoenix connector for DC 12V input with short circuit protection			
Environment	Operating Temperature	0 ~ 50°C ( 32°F ~ 122°F )			
	Air Flow Condition	50 ~ 55°C ( 122°F ~ 131°F ) with 0.7m/s air flow			
	Storage Temperature	-40 ~ 85°C ( -40°F ~ 185°F )			
Physical Size	Dimensions	230mm(W) x 209mm(D) x 106mm(H)			
Packing Size	Dimensions	310mm(W) x 310mm(D) x 180mm(H)			
Weight	N.W. / G.W.	4.5Kg / 5.0Kg			
Certifications	EMC	N/A			
	LVD	N/A			

## Dimension Drawing



## Ordering Information

Part Number	CPU	HDMI/DP	PCIex16	GbE	UBS 3.0	USB 2.0	COM	DDR4 Memory	SSD/HDD
AIS-3023-9E-M0-H00P0	i9-10900TE	1/1	1	2	2	6	4	Option	Option(single)
AIS-3023-7E-M0-H00P0	i7-10700TE	1/1	1	2	2	6	4	Option	Option(single)
AIS-3023-5E-M0-H00P0	i5-10500TE	1/1	1	2	2	6	4	Option	Option(single)
AIS-3023-3E-M0-H00P0	i3-10100TE	1/1	1	2	2	6	4	Option	Option(single)

## Optional Items

Part Number	Description
SODIMM-DDR4-4GB/8GB/16GB	204-Pin SODIMM DDR4-2133, 4GB/8GB/16GB
SA-H1T	2.5" SATA HDD 1TB, WD, 7200RPM
SA-S64L/S12L/S25L/S64D/S12D/S25D	2.5" SATA SSD 64GB/128GB/256GB MLC, 2.5" SATA SSD 64GB/128GB/256GB 3D-TLC
M2-M64D(2242)/N12D(2280)	M.2 SATA3 2242 64GB 3D-TLC/ M.2 2280 128GB 3D-TLC (B-KEY)
M2-M64L(2242)/N12L(2280)	M.2 SATA3 2242 64GB MLC/ M.2 2280 128GB MLC (B-KEY)
M2-Q12D(2242)/R12D(2280)	M.2 NVMe Gen3x4, 2242 128GB 3D-TLC / M.2 NVMe Gen3x4 2280 128G 3D-TLC(M-KEY)
AC-9260	M.2 2230 (E-KEY) Wi-Fi Module, Intel AC9260 802.11abgn + Bluetooth 5.0, dual band 2T2R
AIS-WM-BK	AIS Chassis Wall Mount Bracket Kits, Black, with Screws L=178mm
DHAN3-60W-2P	AC-DC 60W Adapter, 90V-264Vac input by C14 socket, DC 12V@5A output with 2-pin phoneix connector